

THAT WHICH IS CLAIMED:

1. An isolated polypeptide selected from the group consisting of:
 - a) a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4;
 - b) a polypeptide comprising an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number 207048 or an amino acid sequence encoded by the DNA sequence obtained from the overlapping clones deposited with ATCC as Accession 207049 and 207050;
 - c) a polypeptide having RGS activity, wherein the polypeptide comprises a fragment of the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4, wherein the fragment comprises at least 30 contiguous amino acids of SEQ ID NO:2 or SEQ ID NO:4;
 - d) a polypeptide having RGS activity, wherein the polypeptide is encoded by a nucleic acid molecule comprising a nucleotide sequence that is at least 75% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, nucleotides 160-864 of SEQ ID NO:1, nucleotides 134-838 of SEQ ID NO:3, or a complement thereof;
 - e) a polypeptide having RGS activity, wherein the polypeptide is encoded by a nucleic acid molecule that hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, nucleotides 160-864 of SEQ ID NO:1, nucleotides 134-838 of SEQ ID NO:3, or a complement thereof under stringent conditions, said stringent conditions comprising hybridization in 6 X SSC at 42°C, followed by washing with 1 X SSC at 55°C; and
 - e) a polypeptide having RGS activity, wherein the polypeptide is at least 75% identical to the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4, an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number 207048, or an amino acid sequence encoded by the DNA sequence obtained from the overlapping clones deposited with ATCC as Accession 207049 and 207050.

2. The isolated polypeptide of claim 1 further comprising heterologous amino acid sequences.

3. The isolated polypeptide of claim 2, wherein said polypeptide is a fusion protein.

4. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4, an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number 207048, or an amino acid sequence encoded by the DNA sequence obtained from the overlapping clones deposited with ATCC as Accession 207049 and 207050.

5. The isolated polypeptide of claim 4 comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.

6. The isolated polypeptide of claim 4 further comprising heterologous amino acid sequences.

7. The isolated polypeptide of claim 6, wherein said polypeptide is a fusion protein.

8. An isolated polypeptide having RGS activity, wherein the polypeptide comprises a fragment of the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4, wherein the fragment comprises at least 30 contiguous amino acids of SEQ ID NO:2 or SEQ ID NO:4.

9. The isolated polypeptide of claim 8 further comprising heterologous amino acid sequences.

10. The isolated polypeptide of claim 9, wherein said polypeptide is a fusion protein.

11. An isolated polypeptide having RGS activity, wherein the polypeptide is encoded by a nucleic acid molecule comprising a nucleotide sequence that is at least 75% identical to the nucleotide sequence of SEQ ID NO:1, SEQ ID NO:3, nucleotides 160-864 of SEQ ID NO:1, nucleotides 134-838 of SEQ ID NO:3, or a complement thereof.

5

12. The isolated polypeptide of claim 11 further comprising heterologous amino acid sequences.

13. The isolated polypeptide of claim 12, wherein said polypeptide is a fusion protein.

14. An isolated polypeptide having RGS activity, wherein the polypeptide is encoded by a nucleic acid molecule that hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, nucleotides 160-864 of SEQ ID NO:1, nucleotides 134-838 of SEQ ID NO:3, or a complement thereof under stringent conditions, said stringent conditions comprising hybridization in 6 X SSC at 42°C, followed by washing with 1 X SSC at 55°C.

15. The isolated polypeptide of claim 14 further comprising heterologous amino acid sequences.

16. The isolated polypeptide of claim 15, wherein said polypeptide is a fusion protein.

17. An isolated polypeptide having RGS activity, wherein the polypeptide is at least 75% identical to the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4, an amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Accession Number 207048, or an amino acid sequence encoded by the DNA sequence obtained from the overlapping clones deposited with ATCC as Accession 207049 and 207050.

18. The isolated polypeptide of claim 17 further comprising heterologous amino acid sequences.

19. The isolated polypeptide of claim 18, wherein said polypeptide is a fusion
5 protein.

67